

contd.
B2

is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, (C₁-C₅)-alkyl, phenyl, tolyl, CF₃, NO₂, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, (C₁-C₂)-alkylenedioxy, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -NH-CHO, -NH-CO-(C₁-C₅)-alkyl, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

A², which comprises the two carbon atoms bonded to the groups C(=X)-NH- and NH-SO₂R², is

a saturated or partially unsaturated or aromatic monocyclic 5-membered to 7-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, or

a saturated or partially unsaturated or aromatic bicyclic 8-membered to 10-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

R¹, when n in the group R¹-S(O)_n- is 0, is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or is -CN, or

when n in the group R¹-S(O)_n- is 1, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

when n in the group R¹-S(O)_n- is 2, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

R¹ is NR⁵R⁶;

R² is aryl, heterocyclyl, NR⁵R⁶, or (C₁-C₁₀)-alkyl which is unsubstituted or substituted by

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B²

one or more identical or different residues R⁴;

R³ is one or more identical or different residues chosen from hydrogen, halogen, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, (C₁-C₂)-alkylenedioxy, NO₂, -CN, NR⁷R⁸, -CO-NR⁷R⁸, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, -S(O)_n-(C₁-C₅)-alkyl, and (C₁-C₅)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴;

R⁴ is fluorine, OH, -O-(C₁-C₁₀)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, -CN, NR⁷R⁸, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, or oxo;

R⁵ is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R⁴ and aryl, or is aryl, heterocyclyl, -CO-NR⁷R⁸, -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R⁴;

R⁶ is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R⁴ and aryl, or is aryl, heterocyclyl, -CO-NR⁷R⁸, -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R⁴;

or R⁵ and R⁶ together with the nitrogen atom to which they are bonded form a

5-membered to 8-membered saturated or partially unsaturated ring, wherein said ring optionally further comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and

wherein said ring is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, hydroxy-(C₁-C₃)-alkyl-,

contd.
B²

-(C₁-C₃)-alkyl-O-(C₁-C₄)-alkyl, aryl, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-aryl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, (C₂-C₃)-alkylenedioxy, NR⁷R⁸, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-NH₂, -S(O)_n-NH-(C₁-C₃)-alkyl, -S(O)_n-N((C₁-C₃)-alkyl)₂, oxo, -(CH₂)_m-NH₂, -(CH₂)_m-NH-(C₁-C₄)-alkyl, and -(CH₂)_m-N((C₁-C₄)-alkyl)₂ where in the substituent -(CH₂)_m-N((C₁-C₄)-alkyl)₂ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, which optionally further comprises an oxygen atom, sulfur atom, or a group NR⁵ as a ring member;

R⁷ is hydrogen or (C₁-C₇)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, -O-(C₁-C₅)-alkyl, NH₂, -NH-(C₁-C₄)-alkyl, and -N((C₁-C₄)-alkyl)₂ where in the substituent N((C₁-C₄)-alkyl)₂ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, wherein said ring optionally further comprises an oxygen atom, sulfur atom, or a group NR⁵ as a ring member;

R⁸ is hydrogen, -CO-(C₁-C₄)-alkyl, or (C₁-C₇)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, -O-(C₁-C₅)-alkyl, NH₂, -NH-(C₁-C₄)-alkyl, and -N((C₁-C₄)-alkyl)₂ where in the substituent N((C₁-C₄)-alkyl)₂ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring which optionally further comprises an oxygen atom, a sulfur atom, or a group NR⁵ as ring member;

contd.
B2

aryl is phenyl, naphthyl, or heteroaryl, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, (C₁-C₅)-alkyl, phenyl, tolyl, CF₃, -O-CF₃, NO₂, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, (C₁-C₂)-alkylenedioxy, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -NH-CHO, -NH-CO-(C₁-C₅)-alkyl, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

heteroaryl and heteroarylene, independently of each other, are a residue of a monocyclic 5-membered or 6-membered aromatic heterocycle or of a bicyclic 8-membered to 10-membered aromatic heterocycle, wherein said heterocycles comprise one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

heterocyclyl is a residue of a monocyclic or polycyclic 5-membered to 11-membered saturated or partially unsaturated heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, and -CO-O-(C₁-C₅)-alkyl;

n is 0, 1, or 2;

m is 2, 3, or 4; and

X is oxygen or NH, or X is a nitrogen atom which via a single bond is attached to a ring carbon atom in the group A¹ which ring carbon atom is directly adjacent to the carbon atom in A¹ bonded to the group -NH-C(=X)- so that the group

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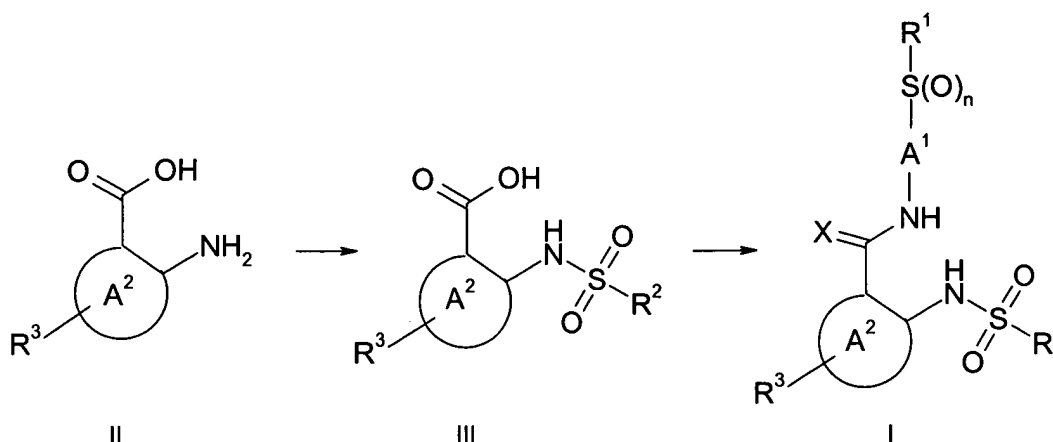
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B²

-NH-C(=X)- together with the carbon atoms in A¹ bonded to it forms an anellated imidazole ring.

B³

14. (Once Amended) A method for preparing a compound of formula I, comprising:
converting a cyclic aminocarboxylic acid compound of formula II into a
sulfonylaminocarboxylic acid compound of formula III; and
converting the sulfonylaminocarboxylic acid compound of formula III into a compound of
formula I:



wherein, in the compounds of formulae I, II, and III:

A¹ is a divalent residue chosen from phenylene, naphthylene, and heteroarylene, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, (C₁-C₅)-alkyl, phenyl, tolyl, CF₃, NO₂, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, (C₁-C₂)-alkylenedioxy, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -NH-CHO, -NH-CO-(C₁-C₅)-alkyl, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl,

contd.
B³

heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

A², which comprises the two carbon atoms bonded to the groups C(=X)-NH- and NH-SO₂R², is

a saturated or partially unsaturated or aromatic monocyclic 5-membered to 7-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, or

a saturated or partially unsaturated or aromatic bicyclic 8-membered to 10-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

R¹, when n in the group R¹-S(O)_n- is 0, is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or is -CN, or

when n in the group R¹-S(O)_n- is 1, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

when n in the group R¹-S(O)_n- is 2, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

R¹ is NR⁵R⁶;

R² is aryl, heterocyclyl, NR⁵R⁶, or (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴;

R³ is one or more identical or different residues chosen from hydrogen,

halogen, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, (C₁-C₂)-alkylenedioxy, NO₂, -CN, NR⁷R⁸, -CO-NR⁷R⁸, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, -S(O)_n-(C₁-C₅)-alkyl, and (C₁-C₅)-alkyl

contd.
B3

which is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^4 is fluorine, OH, -O-(C₁-C₁₀)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, -CN, NR^7R^8 , -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, or oxo;

R^5 is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R^4 and aryl, or is aryl, heterocyclyl, -CO- NR^7R^8 , -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^6 is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R^4 and aryl, or is aryl, heterocyclyl, -CO- NR^7R^8 , -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

or R^5 and R^6 together with the nitrogen atom to which they are bonded form a 5-membered to 8-membered saturated or partially unsaturated ring, wherein said ring optionally further comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and wherein said ring is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, hydroxy-(C₁-C₃)-alkyl-, -(C₁-C₃)-alkyl-O-(C₁-C₄)-alkyl, aryl, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-aryl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, (C₂-C₃)-alkylenedioxy, NR^7R^8 , -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-NH₂, -S(O)_n-NH-(C₁-C₃)-alkyl, -S(O)_n-N((C₁-C₃)-alkyl)₂, oxo, -(CH₂)_m-NH₂, -(CH₂)_m-NH-(C₁-C₄)-alkyl, and

contd.
B3

$-(CH_2)_m-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $-(CH_2)_m-N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, which optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^7 is hydrogen or $(C_1-C_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, $-O-(C_1-C_5)\text{-alkyl}$, NH_2 , $-NH-(C_1-C_4)\text{-alkyl}$, and $-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, wherein said ring optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^8 is hydrogen, $-CO-(C_1-C_4)\text{-alkyl}$, or $(C_1-C_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, $-O-(C_1-C_5)\text{-alkyl}$, NH_2 , $-NH-(C_1-C_4)\text{-alkyl}$, and $-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring which optionally further comprises an oxygen atom, a sulfur atom, or a group NR^5 as ring member;

aryl is phenyl, naphthyl, or heteroaryl, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, $(C_1-C_5)\text{-alkyl}$, phenyl, tolyl, CF_3 , $-O-CF_3$, NO_2 , OH, $-O-(C_1-C_5)\text{-alkyl}$, $-O-(C_2-C_4)\text{-alkyl-O-(C}_1\text{-C}_3\text{)-alkyl}$, $(C_1-C_2)\text{-alkylenedioxy}$, NH_2 , $-NH-(C_1-C_3)\text{-alkyl}$, $-N((C_1-C_3)\text{-alkyl})_2$, $-NH-CHO$, $-NH-CO-(C_1-C_5)\text{-alkyl}$, $-CN$, $-CO-NH_2$,

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-CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

heteroaryl and heteroarylene, independently of each other, are a residue of a monocyclic 5-membered or 6-membered aromatic heterocycle or of a bicyclic 8-membered to 10-membered aromatic heterocycle, wherein said heterocycles comprise one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

heterocyclyl is a residue of a monocyclic or polycyclic 5-membered to 11-membered saturated or partially unsaturated heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, and -CO-O-(C₁-C₅)-alkyl;

n is 0, 1, or 2;

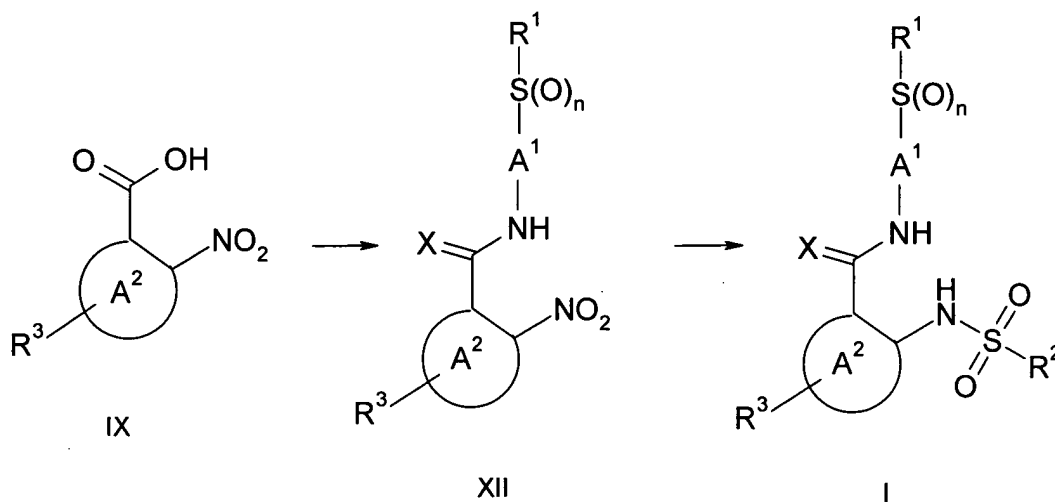
m is 2, 3, or 4; and

X is oxygen or NH, or X is a nitrogen atom which via a single bond is attached to a ring carbon atom in the group A¹ which ring carbon atom is directly adjacent to the carbon atom in A¹ bonded to the group -NH-C(=X)- so that the group -NH-C(=X)- together with the carbon atoms in A¹ bonded to it forms an anellated imidazole ring;

or when one or more of said residues, independent of each other, are present in protected form or in a form of precursor groups.

contd.
 B3

15. (Once Amended) A method for preparing a compound of formula I, comprising:
 converting a cyclic nitrocarboxylic acid compound of formula IX into a nitrocarboxamide compound of formula XII; and
 converting the nitrocarboxamide compound of the formula XII into a compound of formula I by
 reducing the nitro group to an amino group, and
 sulfonylating the amino group:



wherein, in the compounds of formulae IX, XII, and I:

A¹ is a divalent residue chosen from phenylene, naphthylene, and heteroarylene, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, (C₁-C₅)-alkyl, phenyl, tolyl, CF₃, NO₂, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, (C₁-C₂)-alkylenedioxy, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -NH-CHO, -NH-CO-(C₁-C₅)-alkyl, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl,

contd.
B3

heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

A², which comprises the two carbon atoms bonded to the groups C(=X)-NH- and NH-SO₂R², is

a saturated or partially unsaturated or aromatic monocyclic 5-membered to

7-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, or

a saturated or partially unsaturated or aromatic bicyclic 8-membered to

10-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

R¹, when n in the group R¹-S(O)_n- is 0, is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or is -CN, or

when n in the group R¹-S(O)_n- is 1, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

when n in the group R¹-S(O)_n- is 2, R¹ is aryl, heterocyclyl, or (C₁-C₁₈)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴, or

R¹ is NR⁵R⁶;

R² is aryl, heterocyclyl, NR⁵R⁶, or (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different residues R⁴;

R³ is one or more identical or different residues chosen from hydrogen,

halogen, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, (C₁-C₂)-alkylenedioxy, NO₂, -CN, NR⁷R⁸, -CO-NR⁷R⁸, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, -S(O)_n-(C₁-C₅)-alkyl, and (C₁-C₅)-alkyl

contd.
B3

which is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^4 is fluorine, OH, -O-(C₁-C₁₀)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, -O-aryl, -CN, NR^7R^8 , -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, or oxo;

R^5 is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R^4 and aryl, or is aryl, heterocyclyl, -CO- NR^7R^8 , -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^6 is hydrogen, (C₁-C₁₀)-alkyl which is unsubstituted or substituted by one or more identical or different substituents chosen from R^4 and aryl, or is aryl, heterocyclyl, -CO- NR^7R^8 , -CO-aryl, or -CO-(C₁-C₁₀)-alkyl wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

or R^5 and R^6 together with the nitrogen atom to which they are bonded form a 5-membered to 8-membered saturated or partially unsaturated ring, wherein said ring optionally further comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and wherein said ring is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, hydroxy-(C₁-C₃)-alkyl-, -(C₁-C₃)-alkyl-O-(C₁-C₄)-alkyl, aryl, CF₃, OH, -O-(C₁-C₇)-alkyl, -O-aryl, -O-(C₂-C₄)-alkyl-O-(C₁-C₇)-alkyl, (C₂-C₃)-alkylenedioxy, NR^7R^8 , -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-NH₂, -S(O)_n-NH-(C₁-C₃)-alkyl, -S(O)_n-N((C₁-C₃)-alkyl)₂, oxo, -(CH₂)_m-NH₂, -(CH₂)_m-NH-(C₁-C₄)-alkyl, and

contd.
B3

$-(CH_2)_m-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $-(CH_2)_m-N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, which optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^7 is hydrogen or $(C_1-C_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, $-O-(C_1-C_5)\text{-alkyl}$, NH_2 , $-NH-(C_1-C_4)\text{-alkyl}$, and $-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, wherein said ring optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^8 is hydrogen, $-CO-(C_1-C_4)\text{-alkyl}$, or $(C_1-C_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH, $-O-(C_1-C_5)\text{-alkyl}$, NH_2 , $-NH-(C_1-C_4)\text{-alkyl}$, and $-N((C_1-C_4)\text{-alkyl})_2$ where in the substituent $N((C_1-C_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring which optionally further comprises an oxygen atom, a sulfur atom, or a group NR^5 as ring member;

aryl is phenyl, naphthyl, or heteroaryl, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, $(C_1-C_5)\text{-alkyl}$, phenyl, tolyl, CF_3 , $-O-CF_3$, NO_2 , OH, $-O-(C_1-C_5)\text{-alkyl}$, $-O-(C_2-C_4)\text{-alkyl}-O-(C_1-C_3)\text{-alkyl}$, $(C_1-C_2)\text{-alkylenedioxy}$, NH_2 , $-NH-(C_1-C_3)\text{-alkyl}$, $-N((C_1-C_3)\text{-alkyl})_2$, $-NH-CHO$, $-NH-CO-(C_1-C_5)\text{-alkyl}$, $-CN$, $-CO-NH_2$,

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-CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)_n-(C₁-C₄)-alkyl, -S(O)_n-phenyl, and -S(O)_n-tolyl;

heteroaryl and heteroarylene, independently of each other, are a residue of a monocyclic 5-membered or 6-membered aromatic heterocycle or of a bicyclic 8-membered to 10-membered aromatic heterocycle, wherein said heterocycles comprise one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

heterocyclyl is a residue of a monocyclic or polycyclic 5-membered to 11-membered saturated or partially unsaturated heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, and -CO-O-(C₁-C₅)-alkyl;

n is 0, 1, or 2;

m is 2, 3, or 4; and

X is oxygen or NH, or X is a nitrogen atom which via a single bond is attached to a ring carbon atom in the group A¹ which ring carbon atom is directly adjacent to the carbon atom in A¹ bonded to the group -NH-C(=X)- so that the group -NH-C(=X)- together with the carbon atoms in A¹ bonded to it forms an anellated imidazole ring;

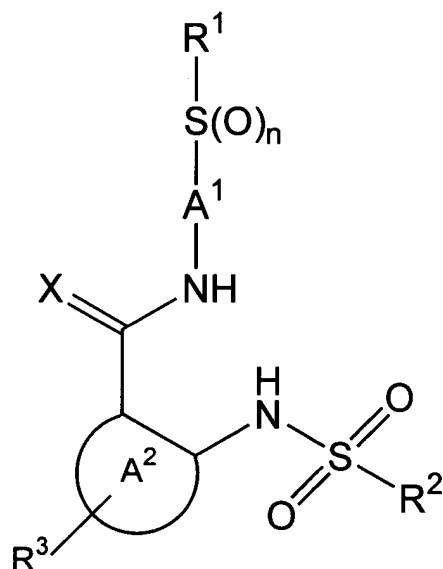
or when one or more of said residues, independent of each other, are present in protected form or in a form of precursor groups.

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16. (Once Amended) A composition, comprising a compound of formula I:



wherein

A¹ is a divalent residue chosen from phenylene, naphthylene, and heteroarylene, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, (C₁-C₅)-alkyl, phenyl, tolyl, CF₃, NO₂, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, (C₁-C₂)-alkylenedioxy, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -NH-CHO, -NH-CO-(C₁-C₅)-alkyl, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, -CO-O-(C₁-C₅)-alkyl, heterocyclyl, CHO, -CO-(C₁-C₅)-alkyl, -S(O)ₙ-(C₁-C₄)-alkyl, -S(O)ₙ-phenyl, and -S(O)ₙ-tolyl;

A², which comprises the two carbon atoms bonded to the groups C(=X)-NH- and NH-SO₂R², is

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a saturated or partially unsaturated or aromatic monocyclic 5-membered to 7-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, or

a saturated or partially unsaturated or aromatic bicyclic 8-membered to 10-membered heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

R^1 , when n in the group $R^1-S(O)_n-$ is 0, is aryl, heterocyclyl, or (C_1-C_{18}) -alkyl which is unsubstituted or substituted by one or more identical or different residues R^4 , or is -CN, or

when n in the group $R^1-S(O)_n-$ is 1, R^1 is aryl, heterocyclyl, or (C_1-C_{18}) -alkyl which is unsubstituted or substituted by one or more identical or different residues R^4 , or

when n in the group $R^1-S(O)_n-$ is 2, R^1 is aryl, heterocyclyl, or (C_1-C_{18}) -alkyl which is unsubstituted or substituted by one or more identical or different residues R^4 , or

R^1 is NR^5R^6 ;

R^2 is aryl, heterocyclyl, NR^5R^6 , or (C_1-C_{10}) -alkyl which is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^3 is one or more identical or different residues chosen from hydrogen, halogen, CF_3 , OH, -O- (C_1-C_7) -alkyl, -O- (C_2-C_4) -alkyl-O- (C_1-C_7) -alkyl, -O-aryl, (C_1-C_2) -alkylenedioxy, NO_2 , -CN, NR^7R^8 , -CO- NR^7R^8 , -CO-OH, -CO-O- (C_1-C_5) -alkyl, heterocyclyl, -S(O) $_n$ - (C_1-C_5) -alkyl, and (C_1-C_5) -alkyl which is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^4 is fluorine, OH, -O- (C_1-C_{10}) -alkyl, -O- (C_2-C_4) -alkyl-O- (C_1-C_7) -alkyl, -O-aryl, -CN,

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NR^7R^8 , $-\text{CO}-\text{NH}_2$, $-\text{CO}-\text{NH}-(\text{C}_1-\text{C}_3)\text{-alkyl}$, $-\text{CO}-\text{N}((\text{C}_1-\text{C}_3)\text{-alkyl})_2$, $-\text{CO}-\text{OH}$,
 $-\text{CO}-\text{O}-(\text{C}_1-\text{C}_5)\text{-alkyl}$, heterocyclyl, or oxo;

R^5 is hydrogen, $(\text{C}_1-\text{C}_{10})\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from R^4 and aryl,
or is aryl, heterocyclyl, $-\text{CO}-\text{NR}^7\text{R}^8$, $-\text{CO}-\text{aryl}$, or $-\text{CO}-(\text{C}_1-\text{C}_{10})\text{-alkyl}$ wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

R^6 is hydrogen, $(\text{C}_1-\text{C}_{10})\text{-alkyl}$ which is unsubstituted or substituted
by one or more identical or different substituents chosen from R^4 and aryl,
or is aryl, heterocyclyl, $-\text{CO}-\text{NR}^7\text{R}^8$, $-\text{CO}-\text{aryl}$, or $-\text{CO}-(\text{C}_1-\text{C}_{10})\text{-alkyl}$ wherein the alkyl residue is unsubstituted or substituted by one or more identical or different residues R^4 ;

or R^5 and R^6 together with the nitrogen atom to which they are bonded form a
5-membered to 8-membered saturated or partially unsaturated ring,
wherein said ring optionally further comprises one or more ring heteroatoms
chosen from nitrogen, oxygen, and sulfur, and
wherein said ring is unsubstituted or substituted by one or more identical or
different substituents chosen from fluorine, $(\text{C}_1-\text{C}_5)\text{-alkyl}$, hydroxy- $(\text{C}_1-\text{C}_3)\text{-alkyl}$ -,
 $-(\text{C}_1-\text{C}_3)\text{-alkyl-O}-(\text{C}_1-\text{C}_4)\text{-alkyl}$, aryl, CF_3 , OH, $-\text{O}-(\text{C}_1-\text{C}_7)\text{-alkyl}$, $-\text{O}-\text{aryl}$,
 $-\text{O}-(\text{C}_2-\text{C}_4)\text{-alkyl-O}-(\text{C}_1-\text{C}_7)\text{-alkyl}$, $(\text{C}_2-\text{C}_3)\text{-alkylenedioxy}$, NR^7R^8 , $-\text{CN}$, $-\text{CO}-\text{NH}_2$,
 $-\text{CO}-\text{NH}-(\text{C}_1-\text{C}_3)\text{-alkyl}$, $-\text{CO}-\text{N}((\text{C}_1-\text{C}_3)\text{-alkyl})_2$, $-\text{CO}-\text{OH}$, $-\text{CO}-\text{O}-(\text{C}_1-\text{C}_5)\text{-alkyl}$,
CHO, $-\text{CO}-(\text{C}_1-\text{C}_5)\text{-alkyl}$, $-\text{S}(\text{O})_n-(\text{C}_1-\text{C}_4)\text{-alkyl}$, $-\text{S}(\text{O})_n-\text{NH}_2$, $-\text{S}(\text{O})_n-\text{NH}-(\text{C}_1-\text{C}_3)\text{-}$
alkyl, $-\text{S}(\text{O})_n-\text{N}((\text{C}_1-\text{C}_3)\text{-alkyl})_2$, oxo, $-(\text{CH}_2)_m-\text{NH}_2$, $-(\text{CH}_2)_m-\text{NH}-(\text{C}_1-\text{C}_4)\text{-alkyl}$, and
 $-(\text{CH}_2)_m-\text{N}((\text{C}_1-\text{C}_4)\text{-alkyl})_2$ where in the substituent $-(\text{CH}_2)_m-\text{N}((\text{C}_1-\text{C}_4)\text{-alkyl})_2$ the
two alkyl groups are independent, identical or different, or are connected by a
single bond and together with the nitrogen atom to which they are bonded form a

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5-membered to 7-membered ring, which optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^7 is hydrogen or $(\text{C}_1\text{-C}_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH , $-\text{O}(\text{C}_1\text{-C}_5)\text{-alkyl}$, NH_2 , $-\text{NH}(\text{C}_1\text{-C}_4)\text{-alkyl}$, and $-\text{N}((\text{C}_1\text{-C}_4)\text{-alkyl})_2$ where in the substituent $\text{N}((\text{C}_1\text{-C}_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring, wherein said ring optionally further comprises an oxygen atom, sulfur atom, or a group NR^5 as a ring member;

R^8 is hydrogen, $-\text{CO}(\text{C}_1\text{-C}_4)\text{-alkyl}$, or $(\text{C}_1\text{-C}_7)\text{-alkyl}$ which is unsubstituted or substituted by one or more identical or different substituents chosen from OH , $-\text{O}(\text{C}_1\text{-C}_5)\text{-alkyl}$, NH_2 , $-\text{NH}(\text{C}_1\text{-C}_4)\text{-alkyl}$, and $-\text{N}((\text{C}_1\text{-C}_4)\text{-alkyl})_2$ where in the substituent $\text{N}((\text{C}_1\text{-C}_4)\text{-alkyl})_2$ the two alkyl groups are independent, identical or different, or are connected by a single bond and together with the nitrogen atom to which they are bonded form a 5-membered to 7-membered ring which optionally further comprises an oxygen atom, a sulfur atom, or a group NR^5 as ring member;

aryl is phenyl, naphthyl, or heteroaryl, and is unsubstituted or substituted by one or more identical or different substituents chosen from halogen, $(\text{C}_1\text{-C}_5)\text{-alkyl}$, phenyl, tolyl, CF_3 , $-\text{O}\text{-CF}_3$, NO_2 , OH , $-\text{O}(\text{C}_1\text{-C}_5)\text{-alkyl}$, $-\text{O}(\text{C}_2\text{-C}_4)\text{-alkyl-O}(\text{C}_1\text{-C}_3)\text{-alkyl}$, $(\text{C}_1\text{-C}_2)\text{-alkylenedioxy}$, NH_2 , $-\text{NH}(\text{C}_1\text{-C}_3)\text{-alkyl}$, $-\text{N}((\text{C}_1\text{-C}_3)\text{-alkyl})_2$, $-\text{NH-CHO}$, $-\text{NH-CO}(\text{C}_1\text{-C}_5)\text{-alkyl}$, $-\text{CN}$, $-\text{CO-NH}_2$, $-\text{CO-NH}(\text{C}_1\text{-C}_3)\text{-alkyl}$, $-\text{CO-N}((\text{C}_1\text{-C}_3)\text{-alkyl})_2$, $-\text{CO-OH}$, $-\text{CO-O}(\text{C}_1\text{-C}_5)\text{-alkyl}$, heterocyclyl, CHO , $-\text{CO}(\text{C}_1\text{-C}_5)\text{-alkyl}$, $-\text{S}(\text{O})_n(\text{C}_1\text{-C}_4)\text{-alkyl}$, $-\text{S}(\text{O})_n\text{-phenyl}$, and $-\text{S}(\text{O})_n\text{-tolyl}$;

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heteroaryl and heteroarylene, independently of each other, are a residue of a monocyclic 5-membered or 6-membered aromatic heterocycle or of a bicyclic 8-membered to 10-membered aromatic heterocycle, wherein said heterocycles comprise one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur;

heterocyclyl is a residue of a monocyclic or polycyclic 5-membered to 11-membered saturated or partially unsaturated heterocycle which comprises one or more ring heteroatoms chosen from nitrogen, oxygen, and sulfur, and which is unsubstituted or substituted by one or more identical or different substituents chosen from fluorine, (C₁-C₅)-alkyl, OH, -O-(C₁-C₅)-alkyl, -O-(C₂-C₄)-alkyl-O-(C₁-C₃)-alkyl, NH₂, -NH-(C₁-C₃)-alkyl, -N((C₁-C₃)-alkyl)₂, -CN, -CO-NH₂, -CO-NH-(C₁-C₃)-alkyl, -CO-N((C₁-C₃)-alkyl)₂, -CO-OH, and -CO-O-(C₁-C₅)-alkyl;

n is 0, 1, or 2;

m is 2, 3, or 4; and

X is oxygen or NH, or X is a nitrogen atom which via a single bond is attached to a ring carbon atom in the group A¹ which ring carbon atom is directly adjacent to the carbon atom in A¹ bonded to the group -NH-C(=X)- so that the group -NH-C(=X)- together with the carbon atoms in A¹ bonded to it forms an anellated imidazole ring;

or a stereoisomer thereof, or a physiologically acceptable salt thereof, or a mixture of two or more of any of the foregoing; and

at least one pharmaceutically acceptable carrier.

17. (Once Amended) A composition useful for the treatment or prevention of cardiovascular diseases, endothelial dysfunction, diastolic dysfunction, atherosclerosis,